

We claim

1. A computer-implemented method, comprising:
inputting a netlist;
- 5 generating symbols and connections formed according to the netlist and a selected wiring harness layout dimension; and
generating a wiring harness diagram along the layout dimension according to the symbols and the connections.
- 10 2. The method of claim 1 in which generating the wiring harness diagram further comprises:
sorting the netlist at least in part according to the connectivity strength of at least one pair of symbols.
- 15 3. The method of claim 1 in which generating the symbols further comprises:
positioning a pin on a side of a first symbol, the side selected according to (a) a connection between the first symbol and a second symbol, and (b) the layout dimension.
- 20 4. The method of claim 2 further comprising:
sequencing symbol placement for the wiring harness diagram such that symbols with
predetermined pin positions are placed in the layout with higher priority than symbols for
which the side of the symbol for placing a pin may be selected.
- 25 5. A computer-implemented method, comprising:
sequencing symbol placement in a wiring harness layout at least in part according to the
connectivity strength of at least one pair of symbols; and
generating a wiring harness diagram according to the layout.

6. The method of claim 5 further comprising:

selecting a side of a first symbol on which to position a pin to increase the directness of connectivity between the first symbol and a second symbol.

5 7. The method of claim 5 in which generating a wiring diagram according to the layout further comprises:

selecting sides of the symbols on which to position pins according to a selected layout dimension; and

10 arranging the pins on the selected sides to increase the directness of connections between the symbols.

8. The method of claim 5 further comprising:

sequencing symbol placement for the wiring harness diagram such that symbols with predetermined pin positions are placed in the layout with higher priority than symbols for which the side of the symbol for placing a pin may be selected.

15 9. A computer-implemented method, comprising:

sequencing symbol placement in a wiring harness layout at least in part according to the connectivity strength of at least one pair of symbols; and

20 selecting a side of a first symbol on which to place a pin to increase the directness of connectivity between the first symbol and a second symbol.

10. The method of claim 9 in which selecting the side of the first symbol further comprises:

25 selecting the side according to a selected layout dimension and a position of the second symbol.

11. The method of claim 9 further comprising:

sequencing symbol placement for the wiring harness diagram such that symbols with predefined pin positions are placed in the layout with higher priority than symbols for which the side of the symbol for placing a pin may be selected.

5

12. A computer-implemented method, comprising:

when at least one first pair of symbols of a netlist has been placed in a wiring harness layout, selecting a next pair of symbols to place in the layout comprising at least one symbol of the first pair; and

10 when there is at least one predefined symbol in the netlist, selecting as the next pair of symbols a pair of symbols having the highest connection strength and comprising a predefined symbol.

13. The method of claim 12 further comprising:

15 selecting for the placement of pins a side of one symbol of the next pair of symbols; and arranging the pins along the side to increase the directness of connection between the next pair of symbols.

14. An article comprising:

20 a machine-readable media comprising instructions which, when executed by the processor of a data processing device, result in inputting a netlist; generating symbols and connections formed according to the netlist and a selected wiring harness layout dimension; and
25 generating a wiring harness diagram along the layout dimension according to the symbols and the connections.

15. The media of claim 14 in which the instructions, when executed by the processor to generate the wiring harness diagram, result in:

sorting the netlist at least in part according to the connectivity strength of at least one pair of symbols.

- 5 16. The media of claim 14 in which the instructions, when executed by the processor to generate the symbols, result in:
positioning a pin on a side of a first symbol, the side selected according to (a) a connection between the first symbol and a second symbol, and (b) the layout dimension.

- 10 17. The media of claim 14 in which the instructions, when executed by the processor, further result in:
sequencing symbol placement for the wiring harness diagram such that symbols with predetermined pin positions are placed in the layout with higher priority than symbols for which the side of the symbol for placing a pin may be selected.

- 15 18. An article comprising:
a machine-readable media comprising instructions which, when executed by the processor of a data processing device, result in
sequencing symbol placement in a wiring harness layout at least in part according to the connectivity strength of at least one pair of symbols; and
20 generating a wiring harness diagram according to the layout.

19. The media of claim 18 in which the instructions, when executed by the processor, further result in:
selecting a side of a first symbol on which to position a pin to increase the directness of
25 connectivity between the first symbol and a second symbol.

20. The media of claim 18 in which the instructions, when executed by the processor to generate the wiring harness diagram, result in:

selecting sides of the symbols on which to position pins according to a selected layout dimension.

21. The media of claim 18 in which the instructions, when executed by the processor, further
5 result in:

sequencing symbol placement for the wiring harness diagram such that symbols with predetermined pin positions are placed in the layout with higher priority than symbols for which the side of the symbol for placing a pin may be selected.

10 22. An article comprising:
a machine-readable media comprising instructions which, when executed by the processor of a data processing device, result in
sequencing symbol placement in a wiring harness layout at least in part according to the connectivity strength of at least one pair of symbols; and
15 selecting a side of a first symbol on which to place a pin to increase the directness of connectivity between the first symbol and a second symbol.

23. The media of claim 18 in which the instructions, when executed by the processor to select the side of the first symbol, result in:
20 selecting the side according to a selected wiring harness layout dimension and a position of the second symbol.

24. The media of claim 22 in which the instructions, when executed by the processor, further result in:
25 sequencing symbol placement for the wiring harness diagram such that symbols with predefined pin positions are placed in the layout with higher priority than symbols for which the side of the symbol for placing a pin may be selected.

10045523 101901
PATENT 2254001

25. An article comprising:

a machine-readable media comprising instructions which, when executed by the processor of a data processing device, result in

when at least one first pair of symbols of a netlist has been placed in a wiring harness layout,

5 selecting a next pair of symbols to place in the layout comprising at least one symbol of the first pair; and

when there is at least one predefined symbol in the netlist, selecting as the next pair of symbols a pair of symbols having the highest connection strength and comprising a predefined symbol.

10 26. The media of claim 25 in which the instructions, when executed by the processor, further result in:

selecting for the placement of pins a side of one symbol of the next pair of symbols.

15 27. An apparatus comprising:

a processor; and

a machine-readable media comprising instructions which, when executed by the processor, result in

inputting a netlist;

20 generating symbols and connections formed according to the netlist and a selected wiring harness layout dimension; and

generating a wiring harness diagram along the layout dimension according to the symbols and the connections.

25 28. The apparatus of claim 27 in which the instructions, when executed by the processor to generate the wiring harness diagram, result in:

sorting the netlist at least in part according to the connectivity strength of at least one pair of symbols.

1004552-101904
T06T0T "E2S400T

29. The apparatus of claim 27 in which the instructions, when executed by the processor to generate the symbols, result in:

positioning a pin on a side of a first symbol, the side selected according to (a) a connection between the first symbol and a second symbol, and (b) the layout dimension.

5

30. The apparatus of claim 27 in which the instructions, when executed by the processor, further result in:

sequencing symbol placement for the wiring harness layout such that symbols with predetermined pin positions are placed in the layout with higher priority than symbols for which the side of the symbol for placing a pin may be selected.

10

31. An apparatus comprising:

a processor; and

a machine-readable media comprising instructions which, when executed by the processor, result in

15

sequencing symbol placement in a wiring harness layout at least in part according to the connectivity strength of at least one pair of symbols; and
generating a wiring harness diagram according to the layout.

32. The apparatus of claim 31 in which the instructions, when executed by the processor, further result in:

selecting a side of a first symbol on which to position a pin to increase the directness of connectivity between the first symbol and a second symbol.

33. The apparatus of claim 32 in which the instructions, when executed by the processor to generate the wiring harness diagram, result in:

selecting sides of the symbols on which to position pins according to a selected layout dimension; and

arranging the pins on the sides to increase the directness of connection between the symbols.

34. The apparatus of claim 32 in which the instructions, when executed by the processor, further result in:

- sequencing symbol placement for the wiring harness layout such that symbols with
5 predetermined pin positions are placed in the layout with higher priority than symbols for which the side of the symbol for placing a pin may be selected.

35. An apparatus comprising:

- a processor; and
10 a machine-readable media comprising instructions which, when executed by the processor, result in
sequencing symbol placement in a wiring harness layout at least in part according to the connectivity strength of at least one pair of symbols; and
selecting a side of a first symbol on which to place a pin to increase the directness of
15 connectivity between the first symbol and a second symbol.

36. The apparatus of claim 35 in which the instructions, when executed by the processor to select the side of the first symbol, result in:

- selecting the side according to a selected layout dimension and a position of the second
20 symbol.

37. The apparatus of claim 35 in which the instructions, when executed by the processor, further result in:

- sequencing symbol placement for the layout such that symbols with predefined pin positions
25 are placed in the layout with higher priority than symbols for which the side of the symbol for placing a pin may be selected.

38. An apparatus comprising:

- a processor; and

a machine-readable media comprising instructions which, when executed by the processor, result in

when at least one first pair of symbols of a netlist has been placed in a wiring harness layout, selecting a next pair of symbols to place in the layout comprising at least one symbol of the

5 first pair; and

when there is at least one predefined symbol in the netlist, selecting as the next pair of symbols a pair of symbols having the highest connection strength and comprising a predefined symbol.

10 39. The apparatus of claim 38 in which the instructions, when executed by the processor, further result in:

selecting for the placement of pins a side of one symbol of the next pair of symbols.

40. A carrier wave, comprising:

15 signals defining component symbols and connections generated according to a netlist and a selected wiring harness layout dimension, the symbols and connections defining a wiring harness diagram along the layout dimension.

41. A carrier wave, comprising:

20 signals defining a first and second component symbols, the component symbols comprising pins, the pins positioned on sides of the symbols selected to increase the directness of connectivity between the first symbol and the second symbol.

1011-59279 "PATENT"